

Title (en)
Superconducting magnet and method of producing same

Title (de)
Supraleitender Magnet und Herstellungsverfahren dafür

Title (fr)
Aimant supraconducteur et son procédé de fabrication

Publication
EP 2587494 A2 20130501 (EN)

Application
EP 12189733 A 20121024

Priority
JP 2011233699 A 20111025

Abstract (en)
A superconducting magnet (10) includes a superconducting wire (1) including magnesium diboride; a superconducting coil (2) where a part (2b) of the superconducting wire is wound; and a joint (3) where an end (1a, 1b) of the superconducting wire and an end of another superconducting wire (1c) are connected and united. The joint includes a sintered body (3c) including magnesium diboride, an averaged particle diameter (D2) of magnesium diboride at the joint of the superconducting wire is greater than an averaged particle diameter (D1) of the magnesium diboride at the part where the superconducting wire is wound.

IPC 8 full level
H01L 39/14 (2006.01); **H01F 6/06** (2006.01); **H01F 41/04** (2006.01); **H01L 39/02** (2006.01); **H01L 39/24** (2006.01); **H01R 4/68** (2006.01)

CPC (source: EP US)
H01F 6/06 (2013.01 - US); **H01F 6/065** (2013.01 - EP US); **H01F 41/048** (2013.01 - EP US); **H01R 4/68** (2013.01 - EP US);
H10N 60/80 (2023.02 - EP US); **H01B 1/00** (2013.01 - EP US); **Y10T 29/49014** (2015.01 - EP US)

Citation (applicant)
• JP 2006174546 A 20060629 - HITACHI LTD
• JP 2003022719 A 20030124 - HITACHI LTD
• W. YAO ET AL.: "A Superconducting Joint Technique for MgB2 Round Wires", IEEE TRANSACTION ON APPLIED SUPERCONDUCTIVITY, vol. 19, no. 3, 2009

Cited by
CN111681848A

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
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EP 12189733 A 20121024; JP 2011233699 A 20111025; US 201213659503 A 20121024